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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/734,861

12/12/2003

Michael R. McGovern

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01/24/2006

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EXAMINER

SONG, HOON K

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/734,861	MCGOVERN ET AL.	
	Examiner	Art Unit	
	Hoon Song	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liese, Jr. (US 4912740) in view of Haskell (US 5550383).

Regarding claim 1, Liese teaches an intraoral x-ray film packet, comprising:

an intraoral outer envelope (16);

a film chip (10) disposed within the outer envelope (16); and

a metal shielding sheet (14) disposed within the outer envelope (16).

However Liese fails to teach that the metal sheet is non-lead and substantially

Tin.

Haskell teaches an intra oral used of Tin material as a shielding (column 5 line 61 and column 7 line 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to adapt the metal sheet of Liese with Tin material as taught by Haskell, since the Tin material of Haskell would provide the necessary protection to healthy tissue during radiation exposure while avoiding the toxicity of material such as lead (column 3 line 5-8 and column 9 line 55-67).

Regarding claims 2-3 and 9-10, Liese as modified by Haskell fails to teach the non-lead sheet is comprised of at least or about 99.95 percent tin.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to adapt almost pure Tin material for the sheet since the image generated on the x-ray chip of Liese would be improved using the pure material than impure material which cause irregular beam scattering or interference.

Regarding claims 4 and 11, Liese as modified by Haskell fails to teach the non-lead sheet having a thickness of about 0.002 to about 0.0024 inches.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the thickness of the non-lead sheet with thickness of about 0.002 to about 0.0024 inches, since Tin material has higher atomic number such that thickness can be reduced at certain thickness while providing same functionality of absorbing or protecting the healthy tissue from the incident x-rays beam.

Furthermore, applicant has not stated any criticality associated with the particular thickness of the sheet nor that it solves any long standing problem in the art. Consequently, a finding of the particular thickness of the metal sheet is considered to be a matter of obvious design choice based on routine experiments.

Regarding claim 5, Liese the sheet absorbs between about 60kVp to about 80 kVp of radiation energy (the metal sheet is considered to absorb radiation energy between 60-80 kVp since an x-ray energy used in dental imaging is about that range).

Regarding claim 6, Liese teaches the outer envelop includes a laminated perimetric edge (figure 2).

Regarding claim 7, an intraoral x-ray film packet adapted to capture an intraoral image when exposed to a source of radiation, comprising:

An intraoral outer envelope (16);

A film chip (10) disposed within the intraoral outer envelope (16); and

A metal sheet (14) disposed within the intraoral outer envelope (16) adapted to absorb backscatter radiation when exposed to a source of radiation (the metal sheet is considered to absorb backscatter radiation since the metal sheet such as lead is a heavy metal material that absorbs any x-rays while it is positioned inside of the film packet).

However Liese fails to teach that the metal sheet is non-lead and substantially Tin.

Haskell teaches an intra oral used of Tin material as a shielding (column 5 line 61 and column 7 line 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to adapt the metal sheet of Liese with Tin material as taught by Haskell, since the Tin material of Haskell would provide the necessary protection to healthy tissue during radiation exposure while avoiding the toxicity of material such as lead (column 3 line 5-8 and column 9 line 55-67).

Regarding claim 8, Liese teaches the sheet (14) is disposed on one side of the film chip (10) such that, when the film chip (10) is exposed to a source of radiation to capture the intraoral image, the film chip (10) is intermediate the source of radiation and sheet (14) (figure 2).

Response to Arguments

In response to applicant's argument that combination of Liese and Haskell references will not result present invention because No image would be obtained since the intraoral area of interest would be shield/protected from the exposure. The examiner disagrees.

Liese teaches an intraoral film packet including an any kind of metal sheet 14 which is only covering one side of (not surrounding) x-ray film 10 in order to absorb x-ray radiations that pass through the x-ray film. In order word, one of the purpose of adapting the metal sheet 14 in Liese reference is to protect/shield the healthy tissues located behind of the metal sheet from radiations pass through the x-ray film. As indicated by the applicant, Haskell clearly teaches that the lead material is used for protecting healthy tissue during radiation exposure such that the healthy tissue is not exposed to radiation. Accordingly, It would have been obvious to one of ordinary skill in the art at the time of the invention to adapt the metal sheet of Liese with Tin material as taught by Haskell, since the Tin material of Haskell would provide the necessary protection/shielding to healthy tissue during radiation exposure while avoiding the toxicity of material such as lead (column 3 line 5-8 and column 9 line 55-67).

In response to applicant's argument that Haskell fails to teach a sheet comprising substantially of Tin, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981). In this case, the use of Tin shield is not bodily incorporated such as in form of the mold into the film pocket of the Liese's reference rather the benefit of using Tin material would be obvious to one of ordinary skill in the art at the time of the invention to protect healthy tissues during radiation exposure while avoiding the toxicity of material such as lead (column 3 line 5-8 and column 9 line 55-67).

Conclusion

This is a continuation of applicant's earlier Application No. 10/734861. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2882

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoon Song whose telephone number is (571) 272-2494. The examiner can normally be reached on 8:30 AM - 5 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (571) 272 - 2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HKS

1/18/06
HKS


DAVID V. BRUCE
PRIMARY EXAMINER